

# The Pesticide Applicator Report



Published by  
The Vermont Agency of Agriculture,  
Food & Markets  
For Vermont's Pesticide Applicators



Spring 2017  
Volume 18 – Issue 1

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& UVM Extension*

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## **Educating Your Clients about Their Obligation to Follow the Pesticide Label**

*Daniel Hudson, UVM Extension Agronomist*

Vermont is well served by its custom pesticide applicators. Having these professionals in the state allows many farmers to focus on their strengths, while delegating important but time-consuming weed control activities. There are plenty of farmers who are quite happy not owning a sprayer, not needing to handle pesticides, and not needing to maintain the necessary certification. That being the case, many farmers are less involved in making pesticide decisions than they should be and often lack understanding of the products used on their fields and the associated management implications. Since many farmers have never had, or no longer hold a private applicator's certificate, many of them incorrectly assume that the pesticide applicator bears all of the responsibility for whatever laws are in place concerning pesticide use: keeping it off of the neighbor's lawn/field and out of the creek, putting the right stuff on the right crop, and applying an appropriate rate of product. Farmers often are not aware they are legally obligated to follow the label when it comes to crop rotation restrictions, re-entry intervals, and pre-harvest intervals. A lack of awareness of crop rotation restrictions is probably the most common practical problem among the three.



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### **What information are custom applicators legally required to provide to customers?**

Current regulations state that the custom applicator “Shall provide the following information (on a bill, invoice or other written documentation) to all customers or persons for which pesticide applications are exchanged for remuneration, at the time of application except for applications under Section IV 8:

- (1) the common or trade name for each pesticide used;
- (2) the EPA registration number for each pesticide used;
- (3) the amount of each pesticide used;
- (4) the pest(s) treated for; and
- (5) the name and signature of the applicator”

That is all good information to give the producer, but it does not convey any information to the farmer about the remaining obligations *they* (the farmers) have in regard to the law/label. If it was a corn herbicide, for example, when can grasses/legumes be planted next? More than one corn herbicide has a plant back restriction of 18 months! Many farmers do not know that!

Because the label is the law, it must be followed absolutely literally even with regard to cover crops. The Vermont Agency of Agriculture has latitude to *reasonably* interpret Federal law with regard to language on labels. When the label states that particular cover crops or specific crops for rotation may be used, or limits when those crops may be planted after application of the herbicide, those restrictions must be followed. However, the Agency has stated that a cover crop being grown in the plant back restriction is compliant with the label restrictions if 1) the farmer/manager accepts the risk that residual herbicides will kill or injure it; and 2) the cover crop is treated as a ‘green manure’ (i.e., it will not be fed to livestock and generally has the purpose of improving the soil). If a cover crop was planted in violation of the label rotational restrictions, it cannot be harvested for feed no matter how beautiful it is, how much it is worth, or how urgently someone

needs the feed.

With more farms being required to follow the new Vermont Required Agricultural Practices (RAPs), I expect to see more crop rotation on fields that have rarely been planted to anything but corn. The reason for this is that the RAPs will require farmers to follow the USDA-NRCS 590 standard (or something like it) for nutrient management planning. The standard, as applied in Vermont, requires limiting soil losses to specified “tolerable” levels, and crop rotation can help accomplish that. Depending on the product used, your pesticide application on a corn field one year might legally prohibit the farmer from planting certain other crops next year. Farmers need to know that failing to adhere to the crop rotation restrictions listed on the label:

- could cause crop loss and injury to the subsequent crop;
- might inadvertently compromise their nutrient management program;
- could result in their feed, livestock, or milk being condemned; and
- is a violation of Federal and State law.

Providing pesticide labels to your clients is a good idea, but given how long and involved some of them are, everyone will be well served if pesticide applicators explained the crop rotation restrictions for their proposed pesticide program to their customers *prior* to pesticide application.

If clients ask whether the subsequent crop often/sometimes might actually tolerate (i.e., not be killed by) actions that otherwise violate the label, the only right answer for the custom applicator to give is, “it doesn’t matter, because it is illegal to violate anything on the label.”

Giving implicit or explicit signals that embolden advisees to violate the label could cause problems at several different levels. Planning for future crop rotations out of corn by using herbicides that do not have long plant back restrictions will ensure that the requirements of the herbicide label will be met.

## Understanding the Pesticide Label

University of Nebraska, Lincoln

The pesticide label is more than just a piece of paper; it is a legal document recognized by courts of law. Pesticide applicators assume certain responsibilities when they purchase and use a product.

Pesticide products are differentiated based on type and registration, and have different label types. There are many different types of pesticides but some examples include herbicides, insecticides, fungicides, termiticides and rodenticides. All pesticide products must be registered with the EPA. The four main pesticide registrations are:

- **Section 3** — product has standard registration;
- **Section 25(b)** — minimal risk, product has been exempted from registration;
- **Section 24(c)** — pesticide has been registered based on a special local need; and
- **Section 18** — product has been given an emergency exemption.

Pesticide manufacturers are required by law to provide certain information on the label. The information includes:

- brand name or trade name of the product;
- ingredient statement;
- percentage or amount of active ingredient(s) by weight;
- net contents of the container; and
- name and address of the manufacturer.

Other required parts of the label are:

- the registration and establishment;
- statement of practical treatment;
- environmental hazard statement;
- classification statement;
- directions for use;
- re-entry statement, if necessary;
- harvesting and/or grazing restrictions; and;
- storage and disposal statements.

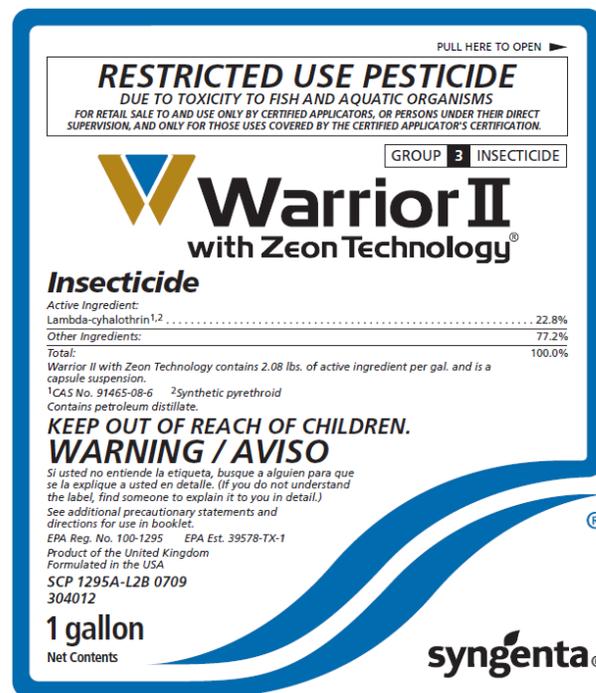


Figure 1. An example of pesticide label.

### Brand, Trade, or Product Name

Brand, trade, or product name is used to identify and market the product (e.g., Warrior II Figure 1). Different companies use different brand names to market products even when the same active ingredient is used.

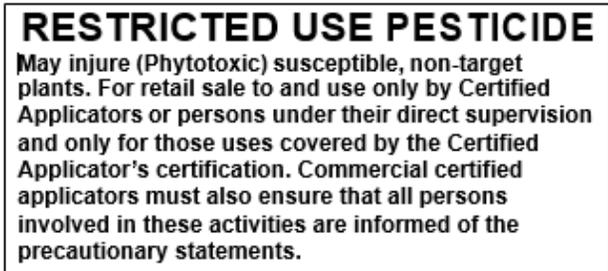
### Ingredient Statement

Every pesticide label must include the product's active and inert ingredients with the percentage of each by weight. Only the active ingredients must be listed out by name (chemical and/or common name). Inert ingredients, also referred to as "other ingredients", don't have to be listed out by name but must show the percentage by weight. Net contents are listed on the front of the product and indicate the total amount of product in the container (fluid ounces, pints, quarts, ounces, pounds, etc.).

### Use Classification Statement

Each pesticide is categorized as either a General Use Pesticide (GUP) or a Restricted Use Pesticide (RUP). In general, GUPs are less toxic

than RUPs. Thus, to purchase, apply, or supervise the use of RUPs, the applicator must be trained and certified (Figure 2). (Remember in Vermont, some products are state-restricted use products, which you *cannot* tell from the label)



**Figure 2. An example of a Restricted Use Pesticide statement.**

#### Type of Pesticide

Most labels state the type of pesticide on the front. For example, the label may say Herbicide, indicating it controls weeds or Insecticide, indicating it will control insects.

#### Manufacturer

The name and address of the manufacturer, formulator, or registrant (e.g., Pesticide Company, Inc. in Figure 1) of the product is required to be on the label. If the registrant is not the manufacturer, then contact information will be preceded by statements like “packed for,” “distributed by,” or “sold by.”

#### Emergency Telephone Number

Often the label will show a telephone number to use in case of emergencies (poisoning, spill, fire, etc.).

#### Registration and Establishment Numbers

The Registration Number (EPA Reg. No.) is proof that the product and the label was approved by the EPA. The Establishment Number (EPA Est. No.) identifies the specific facility that manufactured the product. This allows an individual product to be traced back to the manufacturing facility.

## Signal Words

Pesticide labels must include a signal word prominently displayed on the front unless they have a Class IV toxicity level. Signal words identify the relative toxicity of a particular product. The signal words, in order of increasing toxicity, are Caution, Warning, Danger, and Danger-Poison. (Table I).

Table I. Signal words that may appear on the label.

Signal Word	Category	Toxicity*
Danger or Danger-Poison	Class I — highly toxic	Corrosive or irritant properties, a few drops to 1 teaspoon
Warning	Class II — moderately toxic	1 teaspoon to 1 ounce
Caution	Class III — slightly toxic	1 ounce to 1 pint/ 1 pound
Caution or none	Class IV — very slight hazard	Over 1 pint or 1 pound

\*The lethal dose is less than those listed for a child or person under 150 lbs. and more for a person over 150 lbs.

#### Precautionary Statements

These statements guide the applicator to take proper precautions to protect humans or animals that could be exposed. Sometimes these statements are listed under the heading Hazards to Humans and Domestic Animals. Every pesticide label must include the statement: “Keep Out of Reach of Children.” Some example Precautionary Statements include: “Harmful if inhaled,” and “Remove contaminated clothing and wash before reuse.” Often the Route of Entry and Personal Protective Equipment (PPE) Statements are located under the Precautionary Statement on a label. The Route of Entry Statement identifies the way(s) in which a particular pesticide may enter the body and gives specific actions to prevent exposure. The main routes of exposure are dermal (skin and eyes), oral, and respiratory.

The Personal Protective Equipment Statement outlines the equipment requirements that protect the applicator from exposure to the pesticide. EPA recommends applicators wear at a minimum long-sleeved shirt, long pants, chemical-resistant shoes plus socks, and chemical-resistant gloves in order to be adequately protected, other necessary protective clothing and equipment will be provided on the label.

### *Statement of Practical Treatment*

Also called First Aid on many consumer labels, the Statement of Practical Treatment tells what to do in case of exposure to the product. This information should be read before using the product, again in the event of an emergency, and be available for all emergencies in order to reference specific information. Statements like “move individual to fresh air” and “seek medical attention” are two examples of information found in the Statement of Practical Treatment section.

### *Environmental Hazard Statement*

Environmental Hazard Statement details possible hazards to the environment including soil, water, air, wildlife, fish, and non-target plants. There may be special warning statements like “this product is highly toxic to bees,” “do not contaminate water when disposing of equipment wash-waters,” and “do not allow drift to contact non-target plants or trees.”

### *Physical or Chemical Hazards*

The Physical or Chemical Hazards section of the label describes any possible fire, chemical, or explosion hazards specific to the product. For example, “spray solutions of this product should be mixed, stored, and applied, using only stainless steel, aluminum, fiberglass, plastic, or plastic-lined steel containers” and “this gas mixture could flash or explode causing serious personal injury if ignited by open flame, spark, welder’s torch, lighted cigarette, or other

ignition source” are both statements that can be found under this section of the label.

### *Agricultural Use Requirements*

Information about use in agricultural settings (Figure 3) will only be on pesticide labels where the Worker Protection Standard (WPS) must be followed. The WPS includes specific safety measures for agriculture workers and handlers of agricultural pesticides.

**AGRICULTURAL USE REQUIREMENTS**

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

DO NOT enter or allow workers to enter treated areas during the restricted entry interval (REI) of 12 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is: coveralls, chemical resistant gloves made of any waterproof material such as polyvinyl chloride, nitrile rubber or butyl rubber, and shoes plus socks.

**Special Eye Irritation Provisions:** This product is a severe eye irritant. Although the restricted entry interval expires after 12 hours, for the next 6.5 days entry is permitted only when the following safety measures are provided:

- (1) At least one container designed specifically for flushing eyes must be available in operating condition at the WPS required decontamination site intended for workers entering the treated area.
- (2) Workers must be informed, in a manner they can understand:
  - that residues in the treated area may be highly irritating to their eyes
  - that they should take precautions, such as refraining from rubbing their eyes, to keep the residues out of their eyes
  - that if they do get residues in their eyes, they should immediately flush their eyes using the eyeflush container that is located at the decontamination site or using other readily available clean water
  - how to operate the eyeflush container

Figure 3. An example of an Agricultural Use label section.

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE), and restricted entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 12 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water is:

- Coveralls
- Chemical resistant gloves made of any waterproof material
- Shoes plus socks

The Re-entry Statement or Restricted Entry Interval (REI) is often contained in the information pertaining to WPS. The REI indicates how much time must pass after the application before workers are allowed back in to the treated area with no personal protective equipment (PPE).

Some pesticide applications fall under Non-agricultural Use Requirements (lawns, golf courses, aquatic areas, rights-of-way, etc.) and no specific re-entry time is indicated. Often the label on these products advises people and pets to not enter the area until the application has dried or dust has settled.

### *Storage and Disposal Statement*

Each pesticide label has general storage and disposal instructions. Keep pesticides stored in a secure location, away from food and feed supplies, and in the original containers. When disposing of pesticide containers, triple- or pressure-rinse and puncture containers to avoid re-use. State and local laws may include additional requirements, especially for proper pesticide disposal. Two very common statements found on the label under this section are: “do not contaminate water, food, or feed by storage or disposal,” and “store in original containers only.”

### *Directions for Use*

Directions for Use instruct the applicator how to properly apply the pesticide and achieve the best results. This section provides information such as the rate of application, the sites the product is

intended to protect (e.g., aquatic, non-crop sites, wildlife habitat areas, crop sites, greenhouses, etc.), which pests it controls, mixing directions, and other specific directions related to applying the pesticide.

In cases where the product is intended for use on crops or vegetables, the Pre-harvest Interval (PHI) will be listed, which indicates how much time must pass between the application and harvest to avoid pesticide residues so that the crop will not exceed the maximum tolerance level for pesticide residues. The consequences of not following the PHI can vary, but toxicity to livestock or inability to sell harvested grain are two possible results. On some labels, the Re-entry Statement may also be listed under this section.

A product with the potential to harm pollinators will have restrictions to the application, indicated by a Bee Hazard Icon (Bee Box) on the label (Figure 4) in the directions for use section.

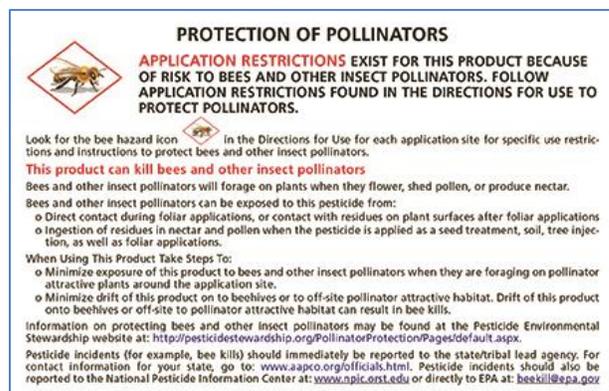


Figure 4. Explanation of the bee hazard icon.

Read and follow all label directions for effective, safe, and legal use of pesticides. Reading the pesticide label will help ensure proper and legal pesticide use.

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## ***Updates at the Agency***

### Worker Protection Standard Revisions Update

#### ***What are the Major Changes for Farmers and Farmworkers?***

The revisions to the Worker Protection Standard cover many different areas. The major revisions include:

- Annual mandatory training to inform farmworkers on the required protections afforded to them.
- Expanded training includes instructions to reduce take-home exposure from pesticides on work clothing and other safety topics.
- First-time ever minimum age requirement: Children under 18 are prohibited from handling pesticides.
- Expanded mandatory posting of no-entry signs for the most hazardous pesticides. The signs prohibit entry into pesticide-treated fields until residues decline to a safe level.
- New no-entry application-exclusion zones up to 100 feet surrounding pesticide application equipment will protect workers and others from exposure to pesticide overspray.
- Requirement to provide more than one way for farmworkers and their representatives to gain access to pesticide application information and safety data sheets – centrally-posted, or by requesting records.
- Mandatory record-keeping to improve states' ability to follow up on pesticide violations and enforce compliance.

Records of application-specific pesticide information, as well as farmworker training, must be kept for two years.

- Anti-retaliation provisions are comparable to Department of Labor's (DOL).
- Changes in personal protective equipment will be consistent with DOL's standards for ensuring respirators are effective, including fit test, medical evaluation and training.
- Specific amounts of water to be used for routine washing, emergency eye flushing and other decontamination, including eye wash systems for handlers at pesticide mixing/loading sites.
- Continue the exemption for farm owners and their immediate families with an expanded definition of immediate family.

### Certification and Training Federal Revisions

#### ***What are the major changes to the Certification and Training Rule?***

The revised rule:

- Enhances applicator competency standards to ensure that RUPs are used safely.
- Establishes a nation-wide minimum age for certified applicators and persons working under their direct supervision.
- Establishes a maximum recertification interval of 5 years for commercial and private applicators.
- Requires specialized certifications for people using specific application methods (fumigation and aerial).

- Provides expanded options for establishing certification programs in Indian Country that acknowledge tribal sovereignty.
- Establishes protection for noncertified applicators by requiring training before they can use RUPs (under the direct supervision of a certified applicator). Noncertified applicators have to complete the training outlined in the rule, complete Worker Protection Standard handler training, or complete a program approved by the state.
- Clarifies and streamlines requirements for states, tribes, and federal agencies to administer their own certification programs, while granting flexibility to tailor programs to the needs of each state, tribe, or federal agency.

### Did you know?



Archived and on-line editions of the Pesticide Applicator Reports are available on the Agency web page under the Pesticide Regulation section on the Training & Recertification page.  
<http://agriculture.vermont.gov/>

## Administration Changes

The Agency of Agriculture has a new Secretary Anson Tebbetts. Alyson Eastman is the new Deputy Secretary.

### Contacts

Field Staff		Phone number	Email address
Bethany Creaser	Field Agent NE	802-793-1628	Bethany.Creaser@vermont.gov
Dominique Golliot	Field Agent SW	802-793-2167	Dominique.Golliot@vermont.gov
Doug Johnstone	Field Agent SE	802-793-2547	Doug.Johnstone@vermont.gov
Matt Wood	Field Agent NW Supervisor	802-318-1383	Matthew.Wood@vermont.gov

### Montpelier Staff

Anne Macmillan	Toxicologist, Cert. & Training	802-828-3479	Anne.Macmillan@vermont.gov
Jeff Comstock	Soil Scientist	802-828-3473	Jeff.Comstock@vermont.gov
Cary Giguere	Program Manager	802-828-6531	Cary.Giguere@vermont.gov
Linda Boccuzzo	Program specialist	802-828-6417	Linda.Boccuzzo@vermont.gov

### Plant Diagnostic Clinic-UVM

Ann Hazelrigg	UVM Extension	802-656-0493	Ann.Hazelrigg@uvm.edu
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## Calibration of pesticide sprayers

Ann Hazelrigg, UVM

When developing new pesticides, the manufacturer tests and determines the optimum rate of the pesticide that should be applied to effectively control the target pest. To make sure this recommended rate is being applied, the applicator must be sure the pesticide sprayer they are using is properly calibrated. Sprayer calibration should be done before any pesticide application to ensure you are not over or under spraying your target pest or site. Skipping this important step can be expensive. If you are applying more than the recommended amount of material, this may be illegal and can result in damage to the treated plant, animal or surface and can damage the environment and non-target organisms. If you are not applying enough of the pesticide, this may result in inadequate control of the pest, which can result in crop loss. Proper calibration can also help identify faulty equipment or nozzles.

It is estimated:

- 60% of all sprayers have a calibration error of plus or minus 10%
- 43% percent of the sprayer nozzles also have a plus or minus 10% variation in discharge from individual nozzles.
- 13% of sprayers have inaccurate pressure gauges, often lower than recommended
- 8% of sprayers have inadequate size of hoses to supply the nozzles, resulting in decreased pressure in the system and less pesticide
- 32% of sprayers have inaccurate travel speed
- Almost 1/3 of all sprayers have improper boom height for the nozzle spacing and discharge angle.

Calibration is not difficult but it may take some practice. Each sprayer you work with may be a little different so it is a good idea to become familiar with calibrating each type. Simply,

calibration is the process used to uniformly apply a specific amount of pesticide with your equipment to a specific area. This typically involves spraying water on a premeasured area and measuring the output while maintaining the same pump pressure and speed of delivery. Accurate and frequent calibration ensures that pesticide applications are efficient, cost-effective and safe.

### For liquid applications:

**First figure out the number of gallons per acre delivered with your equipment-**An easy way to determine the number of gallons per acre you are applying with your sprayer is to simply mark out an acre (209 ft. X 209 ft. or 100 ft. X 436 ft. for rectangle), fill up the spray tank with water and spray as if you were doing the pesticide application. Keep the speed of the tractor constant (usually between 3-5 mph) and maintain the same pump operating pressure since this will need to be the same speed and psi you use when you make the actual application. Measure the amount of liquid required to fill up the tank after spraying the acre and you have your gallons per acre rate. If it takes 15 gallons to replace the water, then you are spraying at a rate of 15 gallons/acre.

### Boom Sprayer Calibration Method:

Boom sprayers deliver the pesticide through several nozzles along a boom. If you are using a boom sprayer, you need to first be sure each nozzle and screen is clean to ensure proper operation. With the tractor at a standstill and pump running, check each nozzle along the boom to be sure each delivers the same volume of spray. This can be done with several graduated measuring cups marked in fluid ounces. Each cup should be labelled **for pesticide use only**. Replace any nozzle whose flow rate varies by more or less than 5% of the average of all the other nozzles. Check each nozzle for uniform spray patterns and replace any that are not uniform. Choose a consistent operating speed (usually between 3-5 mph) and pump pressure (psi).

Measure a course in your field according to the

nozzle spacing on your tractor. Use the predetermined course length below for the each of the different nozzle spacings:

<b>Nozzle Spacing (inches)</b>	<b>12"</b>	<b>16"</b>	<b>20"</b>	<b>24"</b>	<b>28"</b>	<b>32"</b>	<b>36"</b>	<b>40"</b>
<b>Course length (feet)</b>	<b>340'</b>	<b>255'</b>	<b>204'</b>	<b>170'</b>	<b>146'</b>	<b>127'</b>	<b>113'</b>	<b>102'</b>

At a set speed (usually 3-5 mph) measure the time in seconds that it takes to go the length of the course that was determined by your nozzle spacing. For example, if your nozzle spacing is 32 inches, measure how many seconds it takes to drive 127 feet. Do this several times so you have an accurate number of seconds, since each second difference can result in an application error. Now, with the sprayer at a standstill, operate at a selected pressure and catch the water from several nozzles for the same number of seconds you just drove. Be sure all the spray patterns are uniform from each nozzle and each nozzle is delivering the same amount of liquid. The ounces collected per nozzle equals the gallons per acre applied for one nozzle per spacing. So if one nozzle delivered 12 ounces of water this is equals 12 gallons delivered per acre. If you have 5 nozzles, that would be 60 gallons/acre delivered.

Therefore, if the pesticide you are applying requires 4 oz. of liquid product in a gallon of water, you would add 240 oz. (60 gal X 4 oz.) of product to 60 gallons to treat one acre based on the calibration of your sprayer.

**For backpack sprayers:**

It is just as important to calibrate backpack sprayers as any other sprayer. Each person using the sprayer will need to calibrate for his or her speed.

- Measure and mark off an area 20 ft. X 50 ft. (1000 sq. ft.).
- Fill the sprayer with water and apply to the marked off area. The most uniform

application method is to spray the area twice, swinging the wand back and forth the while walking. The second

application should be at right angles to the first application to ensure full coverage.

- Measure the amount of liquid it takes to refill the sprayer. The spraying and measuring should be done a few times to get a consistent amount. The amount of water needed to refill is what is used per 1000 sq. ft.

For example: If you had a 5-gallon sprayer and you sprayed the 1000 sq. ft. area and replaced the liquid with 1 gallon (128 ounces) of water to fill it back up to the 5 gallons. If you used 128 ounces for 1,000 sq. ft. you would be able to spray 5,000 sq. ft. with the entire tank of 5 gallons.

**Changing delivery:**

If your sprayer is delivering more or less than enough spray to each acre, you can change this rate by altering three things: pump pressure, speed of the tractor (or the walking pace) or nozzle size. If you change any of these, recalibrate and recheck periodically. Properly calibrated equipment ensures an effective application with the least damage to non-target organisms as well as not wasting pesticides, time and money.

**Adapted from the Cornell Core Pesticide Manual and the National Pesticide Applicator Certification Core Manual.**

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## ***Home Study Quiz 1 – What You Need to Know About Reading a Pesticide Label***

- 1. If you use a non-registered material and problems arise, are you liable or is it just too bad for your client? Explain.**
- 2. What is a 24(c) pesticide registration?**
- 3. List four pieces of information pesticide manufactures are required by law to have on the label. Provide examples from the Warrior II pesticide label provided.**
- 4. The Worker Protection Standard is intended to protect whom, and where?**
- 5. Why is Warrior II a Restricted Use Pesticide?**
- 6. List two precautions to take to protect Pollinators.**
- 7. What steps need to be followed when disposing of a pesticide container.**
- 8. What is a Pre Harvest Interval?**

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The following information is required. Mail the completed quiz to the Vermont Agency of Agriculture to receive one (1) pesticide recertification credit.

Name:		
Certificate #:		Please check: <input type="checkbox"/> Commercial <input type="checkbox"/> Non-Commercial <input type="checkbox"/> Government <input type="checkbox"/> Private
Street Address:		
City/State/Zip		
Company/Farm:		
Signature:	Date:	
Email address (optional):		

Mail to:

Vermont Agency of Agriculture, Food & Markets  
**Attn: Anne Macmillan**  
116 State Street  
Montpelier, VT 05620-2901

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## ***Home Study Quiz 2 – Calibration of pesticide sprayers***

- 1. What are the three ways you can change the delivery rate of a pesticide?**
- 2. What is meant by calibration?**
- 3. Why is it important each person using a backpack sprayer should calibrate before a pesticide application?**
- 4. How do you figure out how many gallons per acre your backpack sprayer delivers?**
- 5. When should you replace a nozzle?**
- 6. A 12 ft. sprayer boom with 8 nozzles on 16 inch centers is used to apply herbicides to a golf course fairway. At 4 mph the sprayer travelled across a 255 ft. course in 30 seconds. How is the application rate calculated using this information?**
- 7. When you have the correct mixture in your spray tank, can you still apply the wrong amount of pesticide?**
- 8. What can happen if you apply less than the recommended rate of a pesticide?**
- 9. What can happen if you apply more than the recommended rate of a pesticide?**
- 10. How do you determine how many gallons per acre you are applying with a tractor and sprayer?**

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# Pesticide Applicator Report

Vermont Agency of Agriculture, Food & Markets  
Agriculture Resource Management Division  
116 State Street  
Montpelier, VT 05620-2901

«Name»

«Address1»

«Address2»

«City», «StateCode» «ZipCode»

Name:			
Certificate #:		Please check: <input type="checkbox"/> Commercial <input type="checkbox"/> Non-Commercial <input type="checkbox"/> Government <input type="checkbox"/> Private	
Street Address:			
City/State/Zip			
Company/Farm:			
Signature:	Date:		
Email address (optional):			